PHOTOMETRIC APPARATUS AND METHOD FOR CONTROLLING SAME

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a photometric apparatus that includes a display unit including a photometric range, and a method for controlling the photometric apparatus.

[0003] 2. Description of the Related Art

[0004] It is desirable to check a setting state of an imaging apparatus, such as a single-lens reflex (SLR) camera, while a user is looking through a viewfinder of the imaging apparatus. To enable such checking of the setting state, an electronic viewfinder may be used to display an object together with the setting state in the viewfinder. Alternatively, a display element, such as a liquid crystal display, may be arranged with an optical viewfinder to overlap a focusing screen. The display (screen) of the display element is then used to display the setting state and the focus screen in a superimposed manner. However, since the light from the focusing screen is guided to a pentagonal prism and a photometric sensor, the display by the display element on the focusing screen may affect a photometry result.

[0005] In view of the effect on the photometry result, Japanese Patent Application Laid-Open No. 8-160520 discusses a method for performing a correction based on two pieces of information on a type of an exchangeable focusing screen and a position of an area display by a display element. If the display by the display element arranged in a position overlapping the focusing screen affects the photometry result as described above, image capturing parameters, such as exposure and International Organization of Standardization (ISO) sensitivity may be affected.

[0006] According to Japanese Patent Application Laid-Open No. 8-160520, a correction is performed based on the type of the exchangeable focusing screen and the position of the display of the display element on the focusing screen. The effect on the photometry result therefore cannot be reduced unless an amount of correction is changed each time the focusing screen is replaced or the display position of the display element is changed.

SUMMARY OF THE INVENTION

[0007] In view of the foregoing issue, the present invention is directed to a photometric apparatus that reduces an effect on a photometry result caused by the display overlapping the focusing screen.

[0008] According to an aspect of the present invention, a photometric apparatus includes a photometry unit configured to measure object light, and a first display unit arranged on an optical path of the object light to the photometry unit and configured to display a plurality of display items, wherein the first display unit is configured to display a first display item outside a region of a display screen of the first display unit corresponding to a photometric range where the photometry unit measures light, and display a second display item having a display area smaller than a display area of the first display item inside the region of the display screen corresponding to the photometric range.

[0009] Further features of the present invention will become apparent from the following description of exemplary embodiments with reference to the attached drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. **1** is a block diagram illustrating an example of a configuration of an imaging apparatus.

[0011] FIGS. **2**A and **2**B are external perspective views of the imaging apparatus.

[0012] FIGS. **3**A and **3**B are flowcharts illustrating parameter setting processing according to an exemplary embodiment.

[0013] FIG. **4**A is a diagram illustrating a display example of an extra-viewfinder liquid crystal display unit. FIG. **4**B is a diagram illustrating a display example of an intra-viewfinder liquid crystal display unit.

[0014] FIGS. **5**A, **5**B, and **5**C are diagrams illustrating display examples of icons corresponding to white balance.

[0015] FIG. **6**A is a diagram illustrating a display example of the intra-viewfinder liquid crystal display unit. FIG. **6**B is a diagram illustrating a display example of a setting screen.

[0016] FIGS. **7**A, **7**B, **7**C, and **7**D are diagrams each illustrating a display example of icons corresponding to white balance.

DESCRIPTION OF THE EMBODIMENTS

[0017] An exemplary embodiment of the present invention will be described in detail below with reference to the accompanying drawings. It is noted that the following exemplary embodiment is merely one example for implementing the present invention and can be appropriately modified or changed depending on individual constructions and various conditions of apparatuses to which the present invention is applied. Thus, the present invention is in no way limited to the following exemplary embodiment.

[0018] FIG. **1** is a block diagram illustrating an example of a configuration of an imaging apparatus **200** with a built-in photometric apparatus according to an exemplary embodiment of the present invention. FIGS. **2**A and **2**B are diagrams each illustrating an external perspective view of the imaging apparatus **200** serving as an example of the imaging apparatus according to the present exemplary embodiment. FIG. **2**A is a front perspective view of the imaging apparatus **200**. FIG. **2**B is a rear perspective view of the imaging apparatus **200**.

[0019] A lens unit **100** is an exchangeable lens unit including an image lens. A lens (imaging lens) **5** usually includes a plurality of lenses, which is represented by a single lens in FIG. **1** for the sake of simplicity. A communication terminal **6** is a communication terminal for the lens side to communicate with the imaging apparatus side. A communication terminal **10** is a communication terminal for the imaging apparatus **200** to communicate with the lens side. The lens unit **100** communicates with a system control unit **50** via the communication terminals **6** and **10**, controls a diaphragm **1** via a diaphragm driving unit **2** by using a lens system control circuit **4** inside thereof, and changes a position of the lens **5** for focusing via an automatic focusing (AF) driving circuit **3**. The system control unit **50** obtains a full aperture value and a minimum aperture value of the lens unit **100** via the communication terminals **6** and **10**.

[0020] An automatic exposure (AE) sensor **15** measures luminance of an object (object light) formed on a focusing screen **13** through the lens unit **100** and a quick-return mirror **12**.

[0021] An AF sensor **11** is a phase difference detection AF sensor. The AF sensor **11** captures an image incident via the quick-return mirror **12** and a sub mirror **120**, and outputs